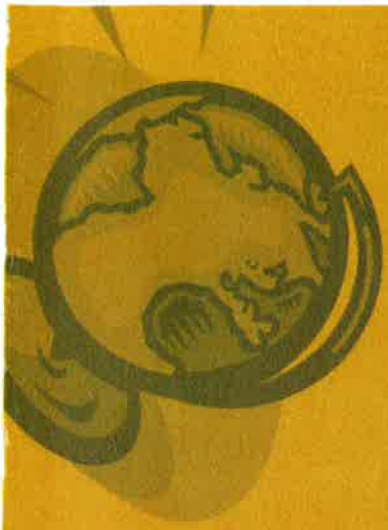
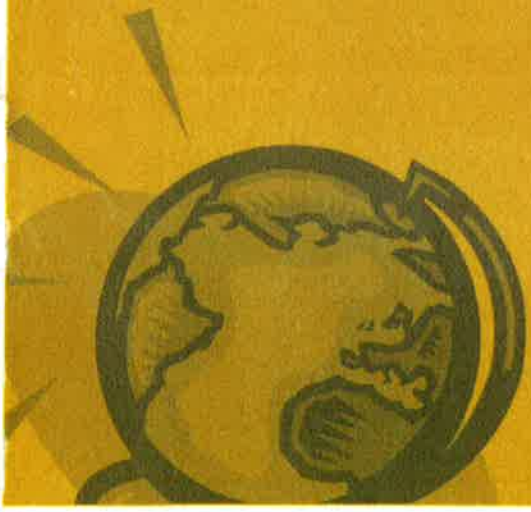


Discovering Our Heritage

A Community Collaborative Approach

Second Grade

Model Social Studies Program Incorporating Environmental Education to Integrate the Teaching of History, Geography, Science, Mathemathics, and Language Arts



Discovering Our Heritage

A Community Collaborative Approach

K–6 Model Social Studies Program Incorporating Environmental Education to Integrate the Teaching of History, Geography, Science, Mathemathics, and Language Arts

Second Grade

Douglas J. Phillips

A Program of the Alabama Wildlife Federation

Alabama Wildlife Federation AWF

Developed by the Alabama Museum of Natural History in cooperation with the Alabama Cooperative Extension System and the Alabama State Department of Education

Design: Nancy Lambert-Brown

To obtain copies of the
Discovering Our Heritage Guidebook for Teachers and Administrators
and the individual grade-level
Discovering Our Heritage Kindergarten through *Fifth Grade*,
please contact:

Alabama Wildlife Federation
46 Commerce Street
Montgomery AL 36104
1-800-822-WILD (9453)
www.alawild.org

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A Message from the State Superintendent of Education

Alabama can proudly boast of numerous innovative educational programs currently underway in school systems around the state. This variety is beneficial because specific pathways to learning that are appropriate in one situation might not be most appropriate for another situation. The professional judgement of local administrators and teachers is our strongest asset in making such determinations. With this in mind, I want to invite your attention to a very timely new program, DISCOVERING OUR HERITAGE, *developed by Alabama educators for Alabama schools and communities.*

Throughout the nation today, there is a growing recognition of the importance of environmental education, to ensure a healthy environment, to sustain a viable economy, and to augment overall student development and academic performance. DISCOVERING OUR HERITAGE *is a unique program that helps address these needs for Alabama without placing added demands on our teachers. Rather, this program incorporates environmental education to support and reinforce many requirements of the Alabama Course of Study. Also, this program is sufficiently flexible to be adapted in most school systems without disrupting existing policies and practices.*

I am pleased to acknowledge the organizations that sponsored production of DISCOVERING OUR HERITAGE, *the Alabama teachers who helped in its development, and the Alabama schools that are using this program. I would like to join them in offering* DISCOVERING OUR HERITAGE *as an especially valuable pathway to educational success.*

— DR. ED RICHARDSON

Foreword

American education today must meet a greater range of needs and serve a larger number of students than ever before. However, our schools also face an increasing array of difficulties, many of which are complex and closely intertwined with the changing conditions of society at large. Any educational program seeking long-term success must recognize this reality. Any program hoping to truly assist schools must appreciate the prevailing demands on teachers, the heavy responsibilities on administrators, and the conflicting pressures that often beset local school boards.

There may be no simple solution fitting every educational need in the nation, but Alabama educators have worked together in designing DISCOVERING OUR HERITAGE as a model for addressing many of the needs in Alabama schools. Central to this design is the philosophy that the realm of nature is an exceptional laboratory for learning, that environmental education, done correctly, provides students with meaningful connections between academic learning, applied problem-solving, civic participation, and the development of personal character and individual responsibility. DISCOVERING OUR HERITAGE is recognized by Alabama teachers for its effectiveness in demonstrating these multiple values of environmental education.

Possibly the greatest potential of this program is suggested by its subtitle, A Community Collaborative Approach. Through development of the DISCOVERING OUR HERITAGE Community Collaborative, schools can promote greater local understanding of the challenges facing education and strengthen local support for school policies and for the needs of teachers, students, and the classroom.

The heritage of our nation is one of freedom-loving peoples striving to improve opportunity for all in a land that is blessed with remarkable natural resources. As a primary vessel of this heritage, our democratic system depends increasingly upon education to inform society, sustain reason, cultivate civility, and instill both a sense of stewardship for our lands and waters and a sense of humanity for one another. In turn, to serve this role effectively, education must draw upon a central premise of democracy and ensure that communities are active participants in supporting local schooling.

DISCOVERING OUR HERITAGE provides a model for addressing these multiple aims through a coherent framework linking people to the land, learning to the real world, and the school to the community. Students and teachers are assisted in assembling otherwise fragmented subject matter into a more meaningful, conceptual understanding of our world. Science is related to society, institutions to cultures, the environment to economics, and personal responsibility to community well-being. Ultimately, DISCOVERING OUR HERITAGE is a program and a process enhancing the role of education as a purposeful means to human progress.

– DR. DOUGLAS J. PHILLIPS
Program Director, DISCOVERING OUR HERITAGE

Acknowledgments

DISCOVERING OUR HERITAGE is the product of the caring commitment of many Alabamians, including the program's sponsors, participating school systems, and, most significantly, Alabama teachers.

DISCOVERING OUR HERITAGE is the culmination of thoughtful input from master teachers in a variety of school systems, urban and rural, across Alabama. The program was initiated in 1996 as an experimental project at Westwood Elementary School, Tuscaloosa County School System, in collaboration with the "Challenge 21" planning initiative. In the following years, under the leadership of System Superintendent, Dr. Joyce Sellers, the program was piloted in elementary schools throughout Tuscaloosa County. It was later adopted and expanded in the Hoover City Schools and Escambia County Schools. Since 1999, these three systems have continued to provide field testing for the program. Sincere thanks and admiration are extended for their efforts.

Special thanks are extended to retired Westwood Elementary principal, Dr. Joan Lowery, and retired Tuscaloosa County Schools Superintendent, Dr. Neil Hyche, for their support in making this educational program possible. Thanks are also due to the Alabama State Department of Education (ADE), State Superintendent Dr. Ed Richardson; ADE specialists Judy Cooper and Frank Heatherly; and social studies consultant Jane Crowe, for assistance in helping ensure that DISCOVERING OUR HERITAGE is fully consistent with the Alabama Course of Study. Likewise, thanks are due to the Alabama Cooperative Extension System, Director Steve Jones, and Community Resource Coordinator, Warren McCord, for assistance in providing teacher training facilities.

DISCOVERING OUR HERITAGE is made available through the leadership of the Alabama Wildlife Federation (AWF). In 1995, AWF responded to the requests of Alabama teachers for development of a model environmental education program organized sequentially to support requirements of the Alabama Course of Study throughout the school year. With the active involvement of its officers and Board of Directors, AWF spearheaded a successful statewide initiative pulling together diverse interest groups and generating the necessary funding to complete DISCOVERING OUR HERITAGE.

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Teacher's Welcome

Welcome to DISCOVERING OUR HERITAGE (DOH), Alabama's first sequentially-organized, content-integrated environmental program for grades K–6 (the available sixth grade option can be found in Appendix E in the *DOH Guidebook for Teachers and Administrators*). We hope you will find DOH useful and exciting. The program is designed to be a part of a broad support network that consists of you and your students, the whole-hearted support of your school and district administrations, and real, direct connections with your community. You should never feel that you are all alone in trying to implement this new way of approaching your yearly program. An important part of DOH is the Community Collaborative process (see Appendix D in the *DOH Guidebook*), during which your school formally invites members of your local community to participate in your program. This should dramatically increase the local resources and volunteers available to you.

DOH is carefully tied to the Alabama Course of Study (ACS) in social studies, science, language arts, and math. You may be reassured that in implementing DOH, you are covering legitimate, recognized subjects and are teaching required content.

...flexibility and the inclusion of good ideas are what DOH is all about.

At first, you might be slightly uneasy that DOH combines multiple subjects throughout each unit, but you should soon see how this integrated approach can be liberating to your program. By the same token, if you have favorite lessons that seem appropriate, a teachable moment, or an insight as to how to better teach your class, trust your instincts. DOH does not require that you slavishly follow an inflexible regimen. To the contrary, flexibility and the inclusion of your own good ideas are important to DOH design.

You will note that DOH is organized largely around social studies. This is to give you the greatest flexibility in arranging situations for applied learning. Also, the subject of social studies affords a wide variety of learning opportunities suitable for underscoring an important DOH premise: a good education should provide students with a conservation ethic; responsible citizenship should include an informed commitment to environmental stewardship (see Appendix: Resources, Part III. Additional Materials for General Consideration for a list of readings, such as *A Sand County Almanac*, which include discussion of related conservation/environmental philosophy).

General Procedure

DISCOVERING OUR HERITAGE is organized on a flexible, repeating outline. Each Unit (six weeks) has a Key Question. This question, as much as any other factor, may be seen as the guiding idea for your activities. Likewise, each Unit has a Key Experience, generally recommended to be taken at the beginning of each unit. This is usually an out-of-class experience of some kind. Not to be lightly dismissed, the Key Experience gives the class a common basis of experience to discuss and write about. Importantly, it also helps to build class spirit and cohesiveness.

The class should invite at least one Community Visitor or Community Resource per week to present a program. If necessary, Key Experiences and the complementary Community Visitors and Resources can be switched as appropriate.

Additionally, we suggest that other visitors come to the classroom—parents, speakers, career representatives, etc.—until the class becomes used to visitors. It is important that standard hospitality procedures are established when dealing with guests—issuing invitations, providing escorts, and

writing thank-you notes. Each child should rotate through these various duties so that everyone becomes proficient in these important skills.

IDEALLY—

1. *Every day*, every student would have:
   - a DOH lesson/activity (this lesson, whether science or social studies, would be followed by a related language activity),
   - an additional science or social studies lesson (often a spin-off of a DOH activity),
   - a math lesson, where possible supporting the other subjects,
   - physical education,
   - individual reading and writing time, and
   - a formal period to work in the journal

2. *Every week*, the class would have:
   - a speaker to visit the class,
   - at least one video presenting visual information,
   - an out-of-school or outdoor experience,
   - a library experience,
   - a geography lesson,
   - a computer lesson,
   - a music and art lesson, and
   - a series of small group meetings followed by a group project

3. *Every unit*, the class would have:
   - a key experience,
   - a keynote visitor, and
   - a class project, to which each child would contribute

However, DOH recognizes that teaching occurs in the real world of the daily school routine, with unexpected and continuing distractions and various curriculum requirements that are difficult to integrate. This reality can pose limitations, but it should not rob us of the essential DOH idea, i.e., the intrigue of pondering our world and our place in it. Along the way and from time to time, we can expect to teach an old-fashioned math, grammar, or history lesson, and if life brings us a good teachable moment that is not "environmental," we should take it. DOH is meant to serve as a conceptual framework that allows the teacher freedom to pursue a good opportunity or idea as it occurs.

Preliminary Preparation

DOH is the product of many years of discussion and input from concerned educators, among whom there is agreement that this model program should "aim high" in expectations for students, teachers, and the community; thus, the extensive scope and regimen of the program. However, insofar as this program is oriented to overall educational improvement, it will be successful only if adjusted for proper fit and acceptance within each school. Therefore, to facilitate program adoption, DOH staff assistance is recommended for establishing the prescribed Community Collaborative (see Appendix D in the *DOH Guidebook*) and for conducting special teacher training. To arrange assistance contact: Wayne Strickland, DOH Outreach Coordinator, Alabama Wildlife Federation, P.O. Box 1109, Montgomery AL 36102; telephone (800) 822–WILD.

Second Grade Program Overview

Yearly Overview

ACS Social Studies Yearly Theme:
Interdependence: Making a Difference in My World

Second grade provides an opportunity to build upon the basic awareness gained in first grade and to give students an introductory exploration of several concepts related to being "American." These include the concepts of democracy, government, freedom, human rights, and cultural and natural heritage. Many of the themes visited in first grade will be revisited in second grade but with new attention to appropriate terminology, governmental procedures, historical events/figures, scientific developments, etc. Second grade assists students in gaining an introductory understanding of the meaning and operation of American society while adding to their awareness of the realities of economics, geography, science, and technology. Second grade also presents an early opportunity to reinforce appreciation of the arts while linking the historical importance of the arts to the progress of human society.

Unit I

Key Question: What is democracy? A primary concern for Unit I is simply to establish in students a first-hand recognition of the often delicate interface between freedom and responsibility. A popular introductory strategy is to invite the class to develop its own set of rules for classroom conduct and procedure. Done correctly, this strategy helps students quickly recognize the difficulties of establishing systematic government. Whatever the chosen approach, Unit I provides an appropriate occasion to impress upon students the unique values of effective democracy.

Important connections: Societies cannot function effectively without governmental order. America society operates according to a democratic government based on American values of freedom and individual liberty. Individual liberty must be balanced with individual responsibility.

Unit II

Key Question: How does geography affect me? Unit II is oriented to provide initial opportunities for "applied geography." That is, students are assisted in conducting a closer examination of the relationships between local community life and local geography.

Important connections: Local geography determines local natural diversity and natural resource availability. Local natural resources and natural features affect economic activities. Responsible people conduct economic activities with responsible concern for the environment.

Unit III

Key Question: How do I use goods and services? "Economics" and "ecology" are both derived from the Greek stem word, ecos, which means "house." Economics refers to the way we manage goods and services in our "house." Ecology refers to the fundamental structure and function of the "house" itself. In other words, we pursue our economic livelihoods within the parameters of natural systems that make life itself possible. Unit III explores many locally relevant economic realities while underscoring our interdependence on natural systems and the need for conservation of natural resources.

Important connections: Economies are systems of producing and providing goods and services. Sustainable production of goods and services is contingent upon the conservation and sustainability of natural resources and natural systems.

Unit IV

Key Question: How am I affected by history? The history of American society is made locally

relevant in Unit IV through student explorations of family and local history. These explorations provide backdrop as the unit includes significant United States history that can be correlated to local events and people across time.

Important connections: The present is a product of the past. Scientific knowledge and technology are built upon the discoveries of the past. Present-day science continues to explore questions of meaning, order, and human advancement.

Unit V

Key Question: How does technology affect me? Unit V affords an opportunity to delineate a variety of key modes of societal endeavors, from transportation to natural resource management, with particular emphasis on the human trait of scientifically manipulating materials, nature, and the laws of physics to improve the human condition.

Important connections: Human beings demonstrate a unique capacity for technological invention. Technological advance has improved many areas of life for humans and nature. (At the teacher's discretion, this unit might be an appropriate time to also note that technology can bring negative consequences.) The proper development and use of new technology is dependent upon thoughtful human judgment and responsibility.

Unit VI

Key Question: How have I benefitted from others? Unit VI seeks to provide appropriate closure for the year by returning students to matters of personal and family "well-being." Previous units have explored a variety of defining aspects of life in American communities. In this unit, we explore relevant implications for how individuals, families, and communities benefit from the combined contributions of government, science, and the arts and humanities. An outcome of this unit is to instill basic pride in the community and the nation, grounded in an appreciation of the diverse cultural heritage that has contributed to American life.

Important connections: Historically, people with different family and cultural backgrounds have worked together in establishing American communities and American life. Historically, the contributions of different people and cultures have helped America grow and progress, scientifically and socially.

DOH Second Grade Key Experiences

Like the Key Questions, the Key Experiences are intended to stimulate genuine curiosity and guide students in active exploration and discovery. The examples of experiences/activities listed below represent stem ideas only. In selecting preferred Key Experiences, teachers should plan for maximum learning value by organizing these experiences/activities to ensure active, hands-on student involvement in observing, investigation, and/or problem-solving.

Unit I Visit city hall or the courthouse; hold a mock election.

Unit II Set up and monitor a school-site weather station; inventory the many variables (average rainfall, temperature, natural resources, recreation, landscapes, etc.) that affect local lifestyles.

Unit III Plan and host a family "brunch."

Unit IV Take a walk through the community with a local historian; visit the local historical society/museum.

Unit V Spend one day without using the telephone, without watching television, and without visiting a fast-food restaurant; record personal reactions.

Unit VI Inventory items in the school and identify businesses/organizations that helped produce/provide these.

Understanding the Unit Plans

This Week's Topic and Focus Paragraph. Each week has a basic topic to guide the week's activities. The focus paragraph briefly explains the week's topic and suggests ways to approach it.

Correlations with Alabama Course of Study. The numbers in parentheses indicate the DOH-relevant Alabama Course of Study sections of the four subjects areas—social studies, science, language arts, and math. These are also shown in the matrices below.

Thought of the week. This is really for you, the teacher, although sometimes it may be appropriate for the children. You get only a little encouragement in this job; maybe you'll find a bit of inspiration here!

Community Visitors and Resources. These are our suggestions for appropriate visitors to the classroom. As the children become accustomed to visitors, visits will be less disruptive. Don't miss this opportunity to teach appropriate behavior and formal courtesies.

Activities and Materials. These are teacher-selected environmental activities from a variety of sources (see Appendix: Resources), presented to you as a starting point. Since many of you are as experienced as the members of the DOH team, we encourage you to search out appropriate favorite activities and materials of your own.

Unit Checkpoints. These activities are enumerated at the beginning of each unit, and it is important that the class try to accomplish them each week. Eventually, we would like every child to write in his/her journal, to write invitations and send thank-you notes, and to read quietly and aloud to others.

Program Matrices linked with Alabama Course of Study

(Social Studies, Science, Language Arts, and Math)

The following matrices compare the requirements of the Alabama Department of Education's official Alabama Course of Study (ACS) with the DISCOVERING OUR HERITAGE (DOH) units. This will serve to guide and reassure teachers, parents, and administrators that the exciting activities of DOH more than meet the requirements of the ACS.

Grade 2 Social Studies Yearly Plan

Week	Unit I What is democracy?	Unit II How does geography affect me?	Unit III How do I use goods and services?	Unit IV How am I affected by history?	Unit V How does technology affect me?	Unit VI How have I benefitted from others?
1	Basic values and principles **7**	Place of origin **9, 21**	Role of government **13**	Family history **21**	Technology **20**	Family culture—similarities **23, 28**
2	Role of government **5**	Local geography—recreation **9–11**	Supply **14–15**	Family traditions **21**	Transportation **20**	Family culture—differences **23, 28**
3	Political parties **6**	Local geography—business **9–10, 12**	Demand **17**	Family occupations **23**	Communication **20**	Community individuals **5, 9, 19**
4	Rules **4**	Local architecture **9**	Food industry **16**	Transportation **22**	Agriculture **20**	Significant individuals **5, 9, 19**
5	Human rights **8**	Geography and food **12**	International trade **18**	Events in U.S. history **24**	Health care **20**	Individuals in the arts **27**
6	Human rights in other countries **8**	People and the land **11**	Conservation and resource management **19**	Significant people **25**	Conservation and resource management **19**	Individuals in the humanities **27**

**The numbers in bold correspond to the current (2001) Alabama Course of Study for the respective grade and subject.*

Grade 2 Science Yearly Plan

Week	Unit I What is democracy?	Unit II How does geography affect me?	Unit III How do I use goods and services?	Unit IV How am I affected by history?	Unit V How does technology affect me?	Unit VI How have I benefitted from others?
1	Interactions and plants & animals **19–20, 23**	The sun in the Solar System **18, 33, 45**	Plant & animal survival—resource needs **19–20, 23–24**	Animals past and present **21, 25**	Technology in science **2, 8, 33–34**	How plants are alike and different **19–20, 22**
2	Changes in the environment **4, 7, 24, 31–32**	Places animals play **4, 20, 23**	Energy from the sun **17, 34**	Animal physical characteristics **19**	Moving people **11, 15–16**	How animals are alike and different **19–20, 22**
3	Diversity in plants and animals **4, 19–20**	Places animals work **4, 20, 23**	Forces **4, 7, 15–16**	Animal behavioral characteristics **20**	Talking with each other **20, 23**	Animals in our community **19–20, 22**
4	Rules of heredity **7, 22**	Animal architecture **19–20, 23**	Animals and their food **4, 19–20, 23**	How things move **15–16**	How things grow **1, 17, 19, 26–28**	Scientists in our community **8–9**
5	Plant and animal survival interactions **20**	Growing seasons **28, 31–32, 34**	Symbiosis **23**	When is it too late? **10, 24**	Technology and health **10–11**	Science and art **9**
6	Survival in the environment **19, 20, 24, 32**	Places animals live **23, 26, 29–30**	The seasons and holidays **34**	Scientists of the past **8–9, 11**	Saving the environment **10–11, 24**	Science and literature **9**

**The numbers in bold correspond to the current (2001) Alabama Course of Study for the respective grade and subject.*

Grade 2 Language Arts Yearly Plan

Week	Unit I What is democracy?	Unit II How does geography affect me?	Unit III How do I use goods and services?	Unit IV How am I affected by history?	Unit V How does technology affect me?	Unit VI How have I benefitted from others?
1	Talking about America **1–10**	Talking and writing about my birthplace **1, 6, 9, 17**	Talking about government **8–9**	Writing & talking about my family, interviewing **1–10, 17**	Reading and talking about technology **13–15, 25**	Writing & talking about my family culture—similarities **8–15**
2	Talking about government **1–10**	Reading and writing about local recreation **10–11, 17**	Talking about supply **1–12**	Writing & talking about my family history, interviewing **1–10, 17**	Reading and talking about transportation **13–15, 25**	Writing & talking about my family culture—differences **8–15**
3	Talking and writing about politics **1–12**	Reading and writing about local businesses **10–11, 17**	Writing about demand **1–12**	Writing & talking about my family traditions, interviewing **1–10, 17**	Reading, talking, & writing about communication **13–15, 25**	Oral presentations on community individuals **7, 9, 16–17, 19, 21**
4	Talking and writing about rules **1–12**	Drawing and describing local architecture **9, 16**	Reading, writing, & talking about the food industry **1–12**	Reading about transportation **22–25**	Reading and talking about agriculture **13–15, 25**	Talking about local people **19, 21**
5	Talking and writing about rights **1–12, 17**	Reading food labels **4, 13**	Reading about trade in other countries **14, 18, 21**	Reading about U.S. history **22–25**	Reading and talking about health care **13–15, 25**	Reading about famous people in the arts **16, 19–21**
6	Reading & talking about rights in other countries **1–12, 18, 21**	Writing about local jobs **6–7**	Oral presentations on how I use goods & services **7, 9, 16**	Oral presentations on conservation **7, 9, 16**	Writing about nature **8–15**	Oral presentations on how others have helped me **7, 9, 16, 19–21**

**The numbers in bold correspond to the current (2001) Alabama Course of Study for the respective grade and subject.*

Grade 2 Math Yearly Plan

Week	Unit I What is democracy?	Unit II How does geography affect me?	Unit III How do I use goods and services?	Unit IV How am I affected by history?	Unit V How does technology affect me?	Unit VI How have I benefitted from others?
1	Count the freedoms we have **1–3**	Compare sizes of plants **29–30, 47**	Total/categorize/ graph the products we use & their cost **1–5, 7, 44–46**	Make a timeline of family history **13–14**	Total/categorize/ graph technology in our school & its cost **1–5, 7**	Observe how plants are alike and different **8, 37–38**
2	Graph temperature changes **1–3, 40–41**	Graph what we do for recreation & its cost **1–3, 40–46**	Total the amount of milk the school buys and uses **1–15**	Predict how animal physical characteristics help & hinder **8, 37–38**	Calculate speed of vehicles **12–13, 21**	Observe how animals are alike and different **8, 37–38**
3	Total the number of plants & animals we see **1–7, 11, 13–14**	Estimate how much land is used for farming **31, 36–37**	Predict and measure how far things move **29, 34, 37–38**	Total/categorize/ graph jobs in our families & salary **1–5, 7, 44–46**	Record in which ways and how much we talk **1–3**	Estimate the community's population **7, 49**
4	List the rules for adding and subtracting **1–2, 9, 11, 14**	Relate architecture to geometric shapes **29–33**	Total/categorize/ graph foods we eat & their cost **1–5, 7, 44–46**	Conduct an experiment about how things move **50–53**	Conduct an experiment on how plants grow **50–53**	Collect information on scientific measurements **49**
5	Predict survival of plants & animals in various conditions **50–52**	Mark the seasons on a calendar **42**	Measure how far away some countries are from the U.S. **13–14, 37**	Make a timeline of events in U.S. history **13, 47–48**	Compare capacities in medicine volume **36, 39**	Draw repeating patterns **47–48**
6	Conduct an experiment to help a plant survive **50–52**	Create word problems about land changes **35**	Predict outcome of over-consumption **44–46**	Add scientists to the timeline **13, 47–48**	Collect info. on how technology helps resource management **49**	Explore probability **53**

**The numbers in bold correspond to the current (2001) Alabama Course of Study for the respective grade and subject.*

Unit I

What is democracy?

Teacher's Notes (Use this page to write down your questions and good ideas for this Unit):

Unit I Week 1

Focus is on basic values and principles and what it means to be an American. Students should locate America on a world map. Students should list and then count the freedoms they have and describe what it would be like without these freedoms. Students should discuss how plants and animals interact in certain areas. This discussion of interactions will set the stage for plant and animal diversity, heredity, and survival in their environment.

This Week's Topic
What does it mean to be American?

Correlations with Alabama Course of Study:
Social Studies:
Basic values and principles **(7)**

Science:
Interactions of plants and animals **(19–20, 23)**

Language Arts:
Talking about America **(1-10)**

Math:
Count the freedoms we have **(1-3)**

Geography:
Map skills

Thought for the week
Show kindness to others and kindness will be returned to you.

Community Visitors and Resources
Environmentalist to talk about plant and animal interactions

Activities and Materials
- *Project WILD*, "What's Wild?"
- Character education
- Discuss orally: "What would our country be like without these freedoms?"
- Video: *Discovering Alabama*, "Red-cockaded Woodpecker"
- Locate America on a world map

Unit Checkpoints
Journal time, quiet reading time, writing invitations and thank-you notes, and reading out loud to others.

Unit I Key Question
What is democracy?

Unit I Key Experience
Visit city hall or the courthouse; hold a mock election.

Unit I Week 2

Focus is on the role of government and how it affects the community and the nation. Students should be able to describe government procedures and how they are affected by them. They should understand that the role of government often changes due to a variety of circumstances. Students should recognize that there are changes in the environment, the most obvious being changes in temperature. Students should graph temperature changes over a period of time.

This Week's Topic

What does our government do?

Correlations with Alabama Course of Study:

Social Studies:
Role of government **(5)**

Science:
Changes in the environment
(4, 7, 24, 31–32)

Language Arts:
Talking about government
(1–10)

Math:
Graph temperature changes
(1–3, 40–41)

Thought for the week

Show generosity to the less fortunate.

Community Visitors and Resources

Mayor to discuss roles of government

Activities and Materials

- *Arthur Meets the President* by Marc T. Brown (Boston: Joy Street Books, 1991); discuss the role of the President
- Check outside temperature for a month and graph changes
- Write to the Department of Transportation for information regarding its role in protecting the environment
- Video: *Discovering Alabama*, "Cahaba River"
- *Project WILD*, "Reduce, Reuse, Recycle"

Unit I Week 3

Focus is on political parties and how they help shape the government. Students should discuss elections and hold a mock election in the classroom. Students should discuss diversity in plants and animals, and recognize how plants and animals of the same kind can vary. They should be able to count and graph the variety of plants and animals they see at home and in the school yard.

This Week's Topic

What are elections?

Correlations with Alabama Course of Study:

Social Studies:
Political parties **(6)**

Science:
What our school looks like outside **(22)**

Language Arts:
Talking and writing about politics **(1–12)**

Math:
Total number of plants and animals we see **(1–7, 11, 13–14)**

Thought for the week

Take care of your world, and it will take care of you.

Community Visitors and Resources

State representative visit school to tell about his or her experience; have the Supervisor of Elections explain the election process

Activities and Materials

- Graph animals & plants (comparing); graph animals belonging to the children and plants on the campus
- Discuss the politics of our country and write a paper
- Hold a mock election
- Nature walk to look for diversity in plants and animals
- Video: *Discovering Alabama*, "Alabama's Natural Diversity"
- *Project WILD*, "What Bear Goes Where?"
- *Project Learning Tree*, "Adopt a Tree—Variations"

Unit I Week 4

Focus is on rules and why they are important for people. Students should extend their ideas of classroom rules to a variety of situations. In science, they should discuss the rules for heredity and how plants and animals can be the same yet different within a species. In math, they can list the rules for addition and subtraction.

This Week's Topic

Why do we need rules?

Correlations with Alabama Course of Study:

Social Studies:
Rules **(4)**

Science:
Rules of heredity **(7, 22)**

Language Arts:
Talking and writing about rules **(1–12)**

Math:
List the rules for adding and subtracting **(1–2, 9, 11, 14)**

Geography:
Map skills

Thought for the week

Embrace your family for they are important.

Community Visitors and Resources

Local genealogist to your class to explain the importance of knowing our family history

Activities and Materials

- *Alabama Environmental Legacy K-2*, "When I was Young in the Mountains," "Reduce," "Six-Pack Math," and "Life in a Fish Bowl"
- Display classroom rules and consequences so that they may be easily seen by everyone in class
- Discuss classroom and community rules and the reasons why we have rules
- List rules for adding and subtracting
- *Project WILD*, "Grasshopper Gravity"
- Video: *Discovering Alabama*, "Arboretums"

Unit I Week 5

Focus is on human rights and why they are important. Students should be able to explain basic human rights and relate those to freedoms that were discussed in Unit I, Week 1. They should relate human rights to plant and animal survival in various environments and conditions.

This Week's Topic

What are human rights?

Correlations with Alabama Course of Study:

Social Studies:
Human rights **(8)**

Science:
Plant and animal interactions **(20)**

Language Arts:
Talking and writing about rights **(1–12, 17)**

Math:
Predict survival of plants & animals in various conditions **(50–52)**

Thought for the week

Until you try, you don't know what you can't do.

Community Visitors and Resources

Local attorney to explain the importance of human rights

Activities and Materials

- *Alabama Environmental Legacy K-2*, "Life Near a Pond"
- Video: *Discovering Alabama*, "Alabama Forests"
- Define and write down some human rights
- Locate Montgomery on a map
- *Mailbox* (April/May 1999), "Exploring the Pond"
- Read books about Martin Luther King Jr. and Rosa Parks
- Write an essay on what human rights mean; compile a list of questions for the community visitor
- *Project WILD Aquatic*, "Aqua Words"

Unit I Week 6

Focus is on human rights in other countries and how they differ from human rights in the United States. Students should again relate plant and animal survival to how people survive when living in conditions of varying degrees of human rights. Students should conduct an experiment to help a plant survive relating survival variables to human rights variables.

This Week's Topic

What happens in other countries?

Correlations with Alabama Course of Study:

Social Studies:
Human rights in other countries **(8)**

Science:
Survival in the environment **(19, 20, 24, 32)**

Language Arts:
Reading and talking about rights in other countries **(1–12, 18, 21)**

Math:
Conduct an experiment to help a plant survive **(50–52)**

Thought for the week

Although we are different, we are all the same.

Community Visitors and Resources

Native of another country to speak on human rights in their country

Activities and Materials

- *Mailbox* (Feb./Mar. '98), "Kenya"
- *Mailbox* (April/May '97), "Egypt"
- *Project WET*, "Thirsty Plants," "The Rife Box"
- Video: *Discovering Alabama*, "Oak Mountain State Park"
- *Project WILD*, "Color Crazy"
- *Project Learning Tree*, "Looking at Leaves"

Unit II

How does geography affect me?

Teacher's Notes (Use this page to write down your questions and good ideas for this Unit):

Unit II Week 1

Focus is on geographical place of origin and where students were born. Students should be able to locate their birthplace on a map. Students should discuss the origin of the Solar System and compare the sizes of plants.

Week's Topic

Where was I born?

Correlations with Alabama Course of Study:

Social Studies:
Place of origin **(9, 21)**

Science:
The sun in the Solar System **(18, 33, 45)**

Language Arts:
Talking and writing about my birth place **(1, 6, 9, 17)**

Math:
Compare sizes of planets **(29–30, 47)**

Thought for the week

A good laugh is sunshine in a house.

Community Visitors and Resources

Parents, local historian to talk about birth places

Activities and Materials

- *Project WILD*, "Everybody Needs a Home"
- Bring in plants from school playground, compare sizes and make a chart
- Discuss each child's birthplace and have them write about it
- *Multiple Intelligence: Teaching for Success*
- *Ranger Rick's NatureScope*, *Astronomy Adventures*, "Our View from Earth"

Unit Checkpoints

Journal time, quiet reading time, writing invitations and thank-you notes, and reading out loud to others.

Unit II Key Question
How does geography affect me?

Unit II Key Experience
Set up and monitor a school-site weather station; inventory the many variables (average rainfall, temperature, natural resources, recreation, landscapes, etc.) that affect local lifestyles.

Unit II Week 2

Focus is on local geography and how it contributes to recreation in the area. Students should be the able to list recreational activities, how much they cost, and graph this information. They should be able to write stories about activities in which they participate. Students should relate human recreation to places where animals live, feed, and play.

This Week's Topic

What recreational activities exist?

Correlations with Alabama Course of Study:

Social Studies:
Local geography—recreation **(9–11)**

Science:
Places animals play **(4, 20, 23)**

Language Arts:
Reading and writing about local recreation **(10–11, 17)**

Math:
Graph what we do for recreation and how much it costs **(1–3, 40–46)**

Geography:
Map skills

Thought for the week

"No" is one of the few words that can never be misunderstood.

Community Visitors and Resources

Local recreation director or representative from the chamber of commerce to speak about local recreation

Activities and Materials

- Graph how many people use the local recreation facilities and the expense to maintain or use them
- Video: *Discovering Alabama*, "Fort Morgan"
- *Learning about Communities*, "Community Map," "How Communities Change"
- Observe animals at play and share with the class your observation
- *Project WILD*, "First Impressions," "What Did Your Lunch Cost Wildlife?"

Unit II Week 3

Focus is on local geography and how it contributes to business in the region. Students should read and write stories about local businesses and estimate how much land is used for various businesses such as farming, industry, retail, and so forth. Students should relate places where people work to places where animals work, such as where they build their homes and where they get their food.

This Week's Topic

What business activities exist?

Correlations with Alabama Course of Study:

Social Studies:
Local geography—business **(9–10, 12)**

Science:
Places animals work **(4, 20, 23)**

Language Arts:
Reading and writing about local businesses **(10–11, 17)**

Math:
Estimate how much land is used for farming **(31, 36–37)**

Geography:
Locate places on the map where farmland is most prevalent

Thought for the week

Train a child in the way he should go, and when he is old he will not turn from it.

—*Proverbs 22:6*

Community Visitors and Resources

A farmer, local business leader to explain the process of farming or the process of running a business

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "How We Use the Land for Fun and Profit"
- *Project Learning Tree*, "Get in Touch with Trees"
- *Learning about Communities*, "Community Business," "Community Workers"
- *Project WILD*, "Animal Characters," "Wildlife is Everywhere!"
- Video: *Discovering Alabama*, "Alabama Soils"

Unit II Week 4

- *Focus is on local architecture of the community. Students should be able to draw local buildings and relate architecture to various geometric shapes. Students should explain the architecture of animal homes and nests.*

This Week's Topic

What special buildings do we have?

Correlations with Alabama Course of Study:

Social Studies:
Local architecture **(9)**

Science:
Animal architecture **(19–20, 23)**

Language Arts:
Drawing and describing local architecture **(9, 16)**

Math:
Relate architecture to geometric shapes **(29-33)**

Thought for the week

A minute of thought is worth more than an hour of talk.

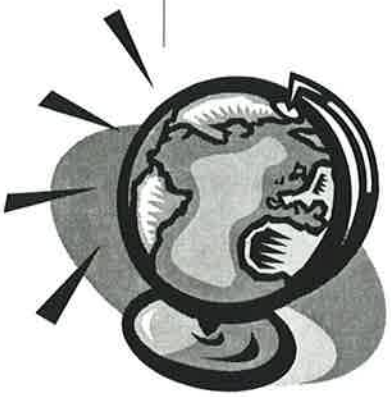
Community Visitors and Resources

Local architect, local carpenter to explain how to design and build a house

Activities and Materials

- Constructing architectural shapes using pattern blocks
- Design your own house plan using measurement and shapes
- *Environmental Education*, "Looking at Leaves, Structure Among Different Trees"
- Videos: *Discovering Alabama*, "Long Leaf Pine," "Long Leaf Ecosystem"
- Identify how many different shapes exist in a particular design
- *Project WILD Aquatic*, "Are You Me?"

Unit II Week 5



Focus is on how the food industry is affected by geography. Students should read food labels for content, calories, vitamins, and minerals. Students should relate geography and food to growing seasons in the region. They should be able to mark the seasons on a calendar.

This Week's Topic

How is the food industry affected by geography?

Correlations with Alabama Course of Study:

Social Studies:
Geography and food **(12)**

Science:
Growing seasons **(28, 31–32, 34)**

Language Arts:
Reading food labels **(4, 13)**

Math:
Mark the seasons on a calendar **(42)**

Thought for the week

The best way to get the last word is to apologize.

Community Visitors and Resources

Local farmer, grocer, soil scientist or geographer to talk about how geography affects food production

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "How We Use the Land for Fun and Profit"
- *Project WILD*, "Surprise Terrarium"
- Graph the growing season of the southern part of the United States
- *Mailbox* (Feb./Mar. 1998), "Layers of Nutritional Learning," "Tasty Lotto"
- *This is the Way We Eat Our Lunch: A Book About Children Around the World* by Edith Baer (New York: Scholastic Inc., 1995)
- *What Food is This* by Rosmarie Hausherr (New York: Scholastic, Inc., 1994)

Unit II Week 6

Focus is on how people affect the land. Students should write about local jobs in the area that cause changes in the landscape such as farming, building construction, and population shifts. They should relate how people change the land where animals live and what effect changing the land can have on animal habitats.

This Week's Topic

How do people affect the land?

Correlations with Alabama Course of Study:

Social Studies:
People and the land **(11)**

Science:
Place animals live
(23, 26, 29–30)

Language Arts:
Writing about local jobs **(6–7)**

Math:
Create word problems about land changes **(35)**

Thought for the week

Humor is mankind's greatest blessing

—*Mark Twain*

Community Visitors and Resources

Local cotton farmer to discuss land changes in our community from beginning to the end of the year

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "Using Our Natural Resources for Agricultural Production," "Old King Cotton"
- *Project WILD*, "Polar Bears in Phoenix?"
- *Project Learning Tree*, "Living with Fire"
- Video: *Discovering Alabama*, "Alabama Adventure"
- Discuss land changes in our area and create land problems
- *Ranger Rick's NatureScope, Amazing Mammals: Part I*, "Habitats for Sale"
- *Ranger Rick's NatureScope, Birds, Birds, Birds*, "House Hunting"

Unit III

How do I use goods and services?

Teacher's Notes (Use this page to write down your questions and good ideas for this Unit):

Unit III Week 1

Focus is on the local government's role and how it affects the community. Students should identify the local government as police officers, the mayor, members of the City Council, and so forth. They should relate the role of government to goods and services provided in the community, including taxes levied for services and prices for products. They should relate goods and services that humans use to the resource needs of plants and animals.

This Week's Topic

What is the government's role?

Correlations with Alabama Course of Study:

Social Studies:
Role of government **(13)**

Science:
Plant and animal survival—resource needs **(19, 20, 23–24)**

Language Arts:
Talking about government **(8–9)**

Math:
Total, categorize, graph the products we use and how much they cost **(1–5, 7, 44–46)**

Thought for the week

One must never be in haste to end a day; there are too few of them in a lifetime.

—*Dale Coman*

Community Visitors and Resources

Animal conservation officer, mayor, or police chief to talk about their roles in government

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "A Plant's Friend," "Nest Sweet Nest," "Going, Going, Gone," "Looking for Litter"
- Video: *Discovering Alabama*, "Village Creek"
- Discuss the role of the mayor and write a paper
- Research how government helps play a role in getting the products and services we need
- *Project WILD*, "Habitracks"

Unit Checkpoints

Journal time, quiet reading time, writing invitations and thank-you notes, and reading out loud to others.

Unit III Key Question
How do I use goods and services?

Unit III Key Experience
Plan and host a family "brunch."

Unit III Week 2

Focus is on supply and who supplies the various needs of the community. Students should be able to list the major things they consume on a daily basis. For example, they should find out who supplies the milk consumed in the cafeteria. Students should relate the goods and services they need to the energy we need from the sun to provide these goods and services.

This Week's Topic

Who supplies our needs?

Correlations with Alabama Course of Study:

Social Studies:
Supply **(14–15)**

Science:
Energy from the sun **(17, 34)**

Language Arts:
Talking about supply **(1–12)**

Math:
Total the amount of milk the school buys and uses **(1–15)**

Geography:
Map skills

Thought for the week

He that is thy friend indeed, he will help thee in thy need.

—*Old English Proverb*

Community Visitors and Resources

Cafeteria supervisor to explain where the food comes from

Activities and Materials

- Compile data from the lunch room about the total amount of milk the school buys and graph it
- *Creative Science Experiences for the Young Child* by Imogene Forte and Joy Mackenzie
- *Mailbox* (Feb/March 1998), "Journal Writing"
- *Ranger Rick's NatureScope, Astronomy Adventures*, "Solar Scramble"
- *Project WILD*, "Make a Coat!"
- *Project Learning Tree*, "Pass the Plants, Please"
- Research how government helps play a role in getting the products and services we need
- *The Kingfisher Young Discoverers Encyclopedia*, "Energy from the Sun"
- *What a Web Site! www.usda.gov/fcs/cnpp/supply* (matches supply and demand)

Unit III Week 3

Focus is on demand and how much individuals in communities need to survive. Students should be able to define demand and differentiate it from supply. In science, students should investigate forces, and predict and measure how far things move.

This Week's Topic

How much do we need?

Correlations with Alabama Course of Study:

Social Studies:
Demand **(17)**

Science:
Forces **(4, 7, 15–16)**

Language Arts:
Writing about demand **(1–12)**

Math:
Predict and measure how far things move **(29, 34, 37–38)**

Geography:
Map skills

Thought for the week

We have been friends together in sunshine and shade.

Community Visitors and Resources

Supervisor of the lunchroom to explain how s/he figures out how much food to order

Activities and Materials

- *Big Book of Everything*, "Hand —Foot—Ruler," "Measuring Mania"
- *Learning about Communities*, "Sharing Community Service"
- *Magic School Bus*, "Hello Out There"
- *Project WILD*, "The Beautiful Basics"
- *Project Learning Tree*, "Sounds Around," "Tree Factory"
- *The Kingfisher Young Discoverers Encyclopedia of Facts & Experiments*, "A First Look at Magnets," "The Pull of the Earth"

Unit III Week 4

Focus is on the food industry and what resources are used to produce various foods. Students should be able to total, categorize, and graph foods eaten by the class and calculate how much they cost. They should relate their food consumption to animal consumption considering animals' supply and demand as relates to animal population.

This Week's Topic

What resources are used to produce food?

Correlations with Alabama Course of Study:

Social Studies:
Food industry **(16)**

Science:
Animals and their food **(4, 19–20, 23)**

Language Arts:
Reading, writing, and talking about the food industry **(1–12)**

Math:
Total, categorize, graph foods eaten by the class and how much they cost **(1–5, 7, 44–46)**

Thought for the week

Neither a borrower, nor a lender be; / For loan oft loses both itself and friend, / And borrowing dulls the edge of husbandry.

—HAMLET (I, III)
BY *WILLIAM SHAKESPEARE*

Community Visitors and Resources

Store manager to talk about where food comes from and how it gets to the store

Activities and Materials

- Discuss and write about where foods comes from and how it gets to the store
- Discuss the foods eaten by the class and the cost, then categorize and graph the foods and cost
- Video: *Discovering Alabama*, "Coastal Alabama, Part I: Natural Diversity"
- *Ranger Rick's NatureScope*, *Amazing Mammals*: *Part I*, "A Menu for Mammals"
- *Ranger Rick's NatureScope*, *Amazing Mammals*: *Part II*, "The Primates"
- *Project WILD*, "Forest in a Jar"

Unit III Week 5

Focus is on international trade and how we get things from other countries. Students should be able to list the major items that come from other countries. For each item, students should locate on a world map the country and its distance from the United States. Students should relate the process of symbiosis to how we depend on other countries for certain trade items.

This Week's Topic

How do we get things from other countries?

Correlations with Alabama Course of Study:

Social Studies:
International trade **(18)**

Science:
Symbiosis **(23)**

Language Arts:
Read about trade in other countries **(14, 18, 21)**

Math:
Measure how far away some countries are from U.S. **(13–14, 37)**

Geography:
Map skills

Thought for the week

No man is useless while he has a friend.

Community Visitors and Resources

Visitor from another country to talk about trade in their country

Activities and Materials

- *Big Book of Everything: Social Studies*, "World Land Formations"
- Discuss land formations and measure how far away some countries are from the U.S.
- *Multiple Intelligences: Teaching for Success*, "Continental Twister"
- *Project WILD Aquatic*, "Fashion a Fish"
- *Project Learning Tree*, "The Shape of Things—Part A"

Unit III Week 6

Focus is on conservation and resource management and how it affects the community and the goods and services provided locally. Students should give oral presentations on how they use specific goods and services. They should be able to predict the effect of over consumption. Students should relate how changes in goods, services, supply, and demand change during the seasons and holidays.

This Week's Topic

What is conservation and resource management?

Correlations with Alabama Course of Study:

Social Studies:
Conservation and resource management **(19)**

Science:
The seasons and holidays **(34)**

Language Arts:
Oral presentations on how I use goods and services **(7, 9, 16)**

Math:
Predict outcome of over consumption **(44–46)**

Thought for the week

If you don't stand for something, you'll fall for anything.

Community Visitors and Resources

Wildlife conservationist to discuss conservation and resource management

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "The Gift of the Tree"
- Write a report on the goods produced in our community
- Define the word "tradition" and list family traditions observed during holidays
- *Project WILD*, "Wildlife is Everywhere!"
- *Project Learning Tree*, "The Shape of Things—Part B"
- *Instant Kids Book: Martin Luther King*, "Read, Write, Publish"
- *Thematic Unit Native Americans*, "About the Navajo"

Unit IV

How am I affected by history?

Teacher's Notes (Use this page to write down your questions and good ideas for this Unit):

Unit IV Week 1

Focus is on history and how it affects many aspects of students' lives. Students should write and talk about their own family history and make a timeline of their family history. They should create questions and interview family members. Students should recognize the changes in animal populations and types over the course of history.

This Week's Topic

What is my family history?

Correlations with Alabama Course of Study:

Social Studies:
Family history **(21)**

Science:
Animals past and present **(21, 25)**

Language Arts:
Writing and talking about my family, interviewing **(1–10, 17)**

Math:
Make a timeline of family history **(13–14)**

Geography:
Map skills

Thought for the week

It's better to have a rich soul than to be rich.

—*Olga Korbut*

Community Visitors and Resources

Grandparents, parents, and/or geneaologist to discuss family history

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "Going, Going, Gone"
- Choose a famous person, research his/her family history, and write a report
- Draw animal homes and compare them to places where people live; make a graph comparing extinct mammals, birds, fish
- *Farewell to Shady Glade* by Bill Peet (Boston: Houghton Mifflin, 1966); discuss and write about what the animals in the story needed to survive
- Video: *Discovering Alabama*, "Wildlife History"
- Discuss family history with family member and do a report; locate on map where each student's family originated
- *Project WILD Aquatic*, "Deadly Waters"

Unit Checkpoints

Journal time, quiet reading time, writing invitations and thank-you notes, and reading out loud to others.

Unit IV Key Question
How am I affected by history?

Unit IV Key Experience
Take a walk through the community with a local historian; visit the local historical society/museum.

Unit IV Week 2

Focus is on family traditions and the special things that families do together. Students should be able to describe specific family traditions in which they participate. Students should recognize that animals have specific physical characteristics that can help and hinder them in the environment.

This Week's Topic

What special things does my family do?

Correlations with Alabama Course of Study:

Social Studies:
Family traditions (21)

Science:
Animal physical characteristics (19)

Language Arts:
Writing and talking about my family history, interviewing (1–10, 17)

Math:
Predict how animal physical characteristics help & hinder (8, 37–38)

Thought for the week

Nothing is so infectious as example.

—*Charles Kingsley*

Community Visitors and Resources

School principal, local historian to talk about family traditions and family history

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "Life under a Log"
- Video: *Discovering Alabama*, "Caves of Alabama"
- Classify animals according to size, shape, color, and number of legs
- Interview a family member; have a prepared list of questions; use photos to make a family tree
- Observe the animals living under a log or rock; use a magnifying glass
- *Project WILD*, "Graphanimal"

Unit IV Week 3

Focus is on family occupations and how jobs have changed over time. Students should be able to list and describe the jobs people in their families have held, such as jobs their grandparents and great grandparents had. They should be able to total, categorize, and graph these jobs and estimate how much each job paid. The students should be able to discuss behavioral characteristics of various animals and observe these behaviors.

This Week's Topic

How have jobs changed?

Correlations with Alabama Course of Study:

Social Studies:
Family occupations **(23)**

Science:
Animal behavioral characteristics **(20)**

Language Arts:
Writing and talking about many family traditions, interviewing **(1–10, 17)**

Math:
Total, categorize, graph jobs in our family and how much they pay **(1–5, 7, 44–46)**

Geography:
Map skills

Thought for the week

We can do more good by being good, than in any other way.

—*Rowland Hill*

Community Visitors and Resources

Head of a business's department of industrial development or human resources to discuss how jobs are developed and have changed

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "A Plant's Friend"
- Graph on a map where three family members of each student work
- List the occupations of the students' parent(s); have the student dress the way his/her parent does for work
- Video: *Discovering Alabama*, "Red Hills Salamander"
- Order ladybugs and observe their behavior
- *The Grouchy Lady Bug* by Eric Carle (New York: HarperCollins, 1996)
- *Project WILD Aquatic*, "Something's Fishy Here!"
- *Project Learning Tree*, "How Plants Grow"

Unit IV Week 4

Focus is on transportation and how it has changed over time. Students should read stories about various types of transportation and explain the various modes of transportation they have seen or have experienced. They should conduct experiments to see how far things move. They should also discuss animal transportation.

This Week's Topic

How has transportation changed over time?

Correlations with Alabama Course of Study:

Social Studies:
Transportation **(22)**

Science:
How things move **(15, 16)**

Language Arts:
Read about transportation **(22–25)**

Math:
Conduct an experiment about how things move **(50–53)**

Geography:
Types of transportation in different countries

Thought for the week

The best mirror is an old friend.

—*George Herbert*

Community Visitors and Resources

County Administrator to discuss the types of transportation the county uses

Activities and Materials

- Categorize machines by wheel, ramp, or lever; predict which category will have the most objects
- Create your own transportation using circus peanuts, canned icing, M&M's, pretzels, gummy life savers
- *Creative Science Experiences for the Young Child*, "What is a Lever?"
- Video: *Discovering Alabama*, "Black Warrior River"
- *Ferry Boat* by Betsy and Giulio Maestro (New York: Crowell, 1986)
- Identify parts of the world on a map were animals are still used for transportation
- *Project WILD*, "Saturday Morning Wildlife Watching"

Unit IV Week 5

Focus is on events in U.S. history. Students should read stories about U.S. history and make a timeline of important events. Students should discuss how much time is involved before an event becomes history.

This Week's Topic

What do we celebrate important events?

Correlations with Alabama Course of Study:

Social Studies:
Events in U.S. history **(24)**

Science:
When is it too late? **(10, 24)**

Language Arts:
Reading about U.S. history **(22–25)**

Math:
Make a timeline of events in U.S. history **(13, 47–48)**

Geography:
Map skills

Thought for the week

Do not think you are on the right road just because it is a well-beaten path.

Community Visitors and Resources

Local historian to talk about U.S. history

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "Who Needs a Tree?"
- *Mailbox* (Feb/Mar. 1998), "Create a Timeline," "Make President's Windsock"
- Discuss the geography of the U.S. during the Civil War
- Read books on special events in American history; write essay on how things might have been done differently
- *Project WILD Aquatic*, "Water We Eating?"
- *Project Learning Tree*, "Tale of the Sun"
- Video: *Discovering Alabama*, "Wetumpka Impact Crater"

Unit IV Week 6

Focus is on significant people and scientists in U.S. history. Students should be able to identify scientists of the past and add significant discoveries by the scientists to the timeline. Students should give oral presentations on significant historical individuals.

This Week's Topic

What impact have significant people had?

Correlations with Alabama Course of Study:

Social Studies:
Significant people **(25)**

Science:
Scientists of the past **(8–9, 11)**

Language Arts:
Oral presentations on conservation **(7, 9, 16)**

Math:
Add scientists to the timeline **(13, 47–48)**

Geography:
Map skills

Thought for the week

Choose thy friends like thy books, few but choice.

Community Visitors and Resources

Local conservationist to speak on the importance of conserving water

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "Mini-Water Treatment Plant"
- Video: *Discovering Alabama*, "Fort Toulouse/Jackson"
- *Project WILD*, "Playing Lightly on the Earth"
- *Project Learning Tree*, "Tree Treasures—Variation 2"

Unit V

How does technology affect me?

Teacher's Notes (Use this page to write down your questions and good ideas for this Unit):

Unit V Week 1

Focus is on technology and how it affects individuals and the community. Students should read about what technology is and be able to categorize, total, and graph the various technologies used in the school. They should be able to state how much various technologies cost. They should identify various types of technology used in science.

This Week's Topic

What is technology?

Correlations with Alabama Course of Study:

Social Studies:
Technology **(20)**

Science:
Technology in science
(2, 8, 33–34)

Language Arts:
Reading and talking about technology **(13–15, 25)**

Math:
Total, categorize, graph **(1–5, 7)**

Thought for the week

What you get is a living; what you give is a life.

—*Lillian Gish*

Community Visitors and Resources

Technology supervisor to speak on importance of technology in our school

Activities and Materials

- Identify the various technologies the school (and local) library uses
- Compile information about school technology; use on a graph
- *Multiple Intelligences*, pp. 97-100
- Have the students each read a book on a technology of their choosing and write a report
- *Project WILD*, "What's That, Habitat?"
- Video: *Discovering Alabama*, "Village Creek"

Unit Checkpoints

Journal time, quiet reading time, writing invitations and thank-you notes, and reading out loud to others.

Unit V Key Question
How does technology affect me?

Unit V Key Experience
Spend one day without using the telephone, without watching television, and without visiting a fast-food restaurant; record personal reactions.

Unit V Week 2

Focus is on technology and how technology has helped transportation. Students should compare the differences in transportation over history and how technology has increased the efficiency, cost, and speed of transportation. Students should describe various ways of moving people and goods. They should be able to calculate the speed of vehicles and rate them as slow, medium, or fast.

This Week's Topic

How has technology helped transportation?

Correlations with Alabama Course of Study:

Social Studies:
Transportation **(20)**

Science:
Moving people **(11, 15–16)**

Language Arts:
Reading and talking about transportation **(13–15, 25)**

Math:
Calculate speed of vehicles **(12–13, 21)**

Thought for the week

Honor and honesty, compassion and truth are good even if they kill you, for they alone give life its dignity and worth.

—*W. A. Percy*

Community Visitors and Resources

Railroad worker to talk about train transportation of people and goods

Activities and Materials

- *Alabama's Environmental Legacy K–2*, "Noise in your Neighborhood"
- *MailBox* (Feb/Mar 1999), "The Underground Railroad"
- Predict which forms of transportation move the fastest and graph the results
- *Project Learning Tree*, "On the Move," "Then and Now"
- *Project WILD*, "Too Close for Comfort"

Unit V Week 3

Focus is on how technology has helped communication. Students should be able to describe the various forms of communication their families use. They should record how and how much they talk with each other.

This Week's Topic

How has technology helped communication?

Correlations with Alabama Course of Study:

Social Studies:
Communication **(20)**

Science:
Talking with each other **(20, 23)**

Language Arts:
Writing and talking about my family traditions, interviewing **(1–10, 17)**

Math:
Record in which ways and how much we talk **(1–3)**

Thought for the week

The smallest act of kindness is worth more than the grandest intention.

Community Visitors and Resources

Local newspaper editor to teach the students how to conduct an interview

Activities and Materials

- *Alabama's Environmental Legacy K–2*, "Noise in Your Neighborhood"
- Video: *Discovering Alabama*, "Tannehill Historical State Park"
- *MailBox* (June/July 1997), "Sizing up Whales," "Whale Talk"
- *Project Learning Tree*, "Habitat Pen Pals," "Power of Print," "Sounds Around"
- *Kingfisher Young Discoverers Encyclopedia of Fact and Experiments*, "Sound Waves"
- *Project WILD*, "Classroom Carrying Capacity"

Unit V Week 4

Focus is on how technology has improved agriculture. Students should be able to list major agricultural crops and explain how things grow. They should conduct an experiment to see how plants grow under a variety of conditions.

This Week's Topic

How has technology helped agriculture?

Correlations with Alabama Course of Study:

Social Studies:
Agriculture **(20)**

Science:
How things grow
(1, 17, 19, 26–28)

Language Arts:
Reading and talking about agriculture **(13–15, 25)**

Math:
Conduct an experiment on how plants grow **(50–53)**

Thought for the week

He who wishes to secure the good of others has already secured his own.

Community Visitors and Resources

Farmer to talk to the students about agriculture

Activities and Materials

- *Alabama's Environmental Legacy K-2*, "Alabama Peanut Party"
- *Creative Science Experiences*, "How Does Your Garden Grow?," "Where Do Plants Come From?"
- *Project Learning Tree*, "Bursting Buds"
- *Project WILD Aquatic*, "Plastic Jellyfish"
- *Kingfisher Young Discoverers Encyclopedia of Facts and Experiments*, "Farming Takes Over"
- Video: *Discovering Alabama*, "Alabama Trees"

Unit V Week 5

Focus is on health care and how technology has improved it. Students should be able to identify major health care issues and how technology can help detect, treat, and cure some diseases. Students should compare capacities of medicine volume using the metric system—cubic centimeter, milliliter, liter, etc.

This Week's Topic

How has technology helped health care?

Correlations with Alabama Course of Study:

Social Studies:
Health care **(20)**

Science:
Technology and health **(10–11)**

Language Arts:
Reading and talking about health care **(13–15, 25)**

Math:
Compare capacities in medicine volume **(36, 39)**

Geography:
Map skills

Thought for the week

It is better for men to die than to call evil good, and virtue itself will never die.

—*W. A. Percy*

Community Visitors and Resources

Nurse/doctor to talk about health care

Activities and Materials

- *Creative Science Experiments*, "How Does a Body Fix Itself," "Here's How I Take Care of my Body"
- *Magic School Bus* CD: *Human Body* (Microsoft Windows)
- *Kingfisher Young Discoverers Encyclopedia of Facts and Experiments*, "A Healthy Diet," "Keeping Fit"
- *Project Learning Tree*, "Energy Sleuths"
- *Project WILD*, "The Thicket Game"

Unit V Week 6

Focus is on how technology has helped conservation and resource management. Students should write stories about nature and how technology can be used to help it, such as in farming and fire fighting. They should be able to discuss how saving the environment is beneficial for plants, animals, and people.

This Week's Topic

How has technology helped conservation and resource management?

Correlations with Alabama Course of Study:

Social Studies:
Conservation and resource management **(19)**

Science:
Saving the environment **(10–11, 24)**

Language Arts:
Writing about nature **(8–15)**

Math:
Collect information on how technology helps resource management **(49)**

Thought for the week

Nothing gives such a blow to friendship as detecting another in an untruth.

Community Visitors and Resources

Forest ranger to talk about saving the environment

Activities and Materials

- Video: *Discovering Alabama*, "Cahaba River Watershed"
- *Alabama's Environmental Legacy, K-2*, "Trash Tunes," "What is Trash?"
- *Project Learning Tree*, "Waste Watchers"
- *Water Sourcebook*, "So Much Water, So Little to Drink," "Conserve Every Drop!"
- *Project WILD*, "Can Do!"

Unit VI

How have I benefitted from others?

Teacher's Notes (Use this page to write down your questions and good ideas for this Unit):

Unit VI Week 1

Focus is on family culture and how the students' families are like other families. Students should be able to describe similarities in all families in the things they do that are alike. Students should be able to discuss how plants and animals share similarities within and across species.

This Week's Topic

How is my family like other families?

Correlations with Alabama Course of Study:

Social Studies:
Family culture—similarities **(23, 28)**

Science:
How plants are alike and different **(19–20, 22)**

Language Arts:
Writing and talking about my family culture—similarities **(8–15)**

Math:
Observe how plants are alike and different **(8, 37–38)**

Thought for the week

A man who falls in love with himself has no rivals.

Community Visitors and Resources

Students' family members to talk to the class about family similarities

Activities and Materials

- *Project WILD*, "Stormy Weather"
- Have each student discuss and write about their family culture
- Video: *Discovering Alabama*, "Arboretums"
- *Alabama's Environmental Legacy K–2*, "Johnny Appleseed: Friend of Trees"
- *Project Learning Tree*, "How Plants Grow"

Unit Checkpoints

Journal time, quiet reading time, writing invitations and thank-you notes, and reading out loud to others.

Unit V Key Question
How have I benefitted from others?

Unit V Key Experience
Inventory items in the school and identify businesses/organizations that helped produce/provide these.

Unit VI Week 2

Focus is on family culture and how the students' families are different from other families. Students should be able to describe differences in families and things they do, such as traditions, that are different. Students should be able to discuss how plants and animals are different within and across species.

This Week's Topic

How is my family different from other families?

Correlations with Alabama Course of Study:

Social Studies:
Family culture—differences **(23, 28)**

Science:
How animals are alike and different **(19–20, 22)**

Language Arts:
Writing and talking about my family culture—differences **(8–15)**

Math:
Observe how animals are alike and different **(8, 37–38)**

Thought for the week

When friends ask, there is no tomorrow…only now.

Community Visitors and Resources

Parents or friends of different culture to talk about their culture and cultural differences

Activities and Materials

- *Project Learning Tree*, "Picture This!"
- Video: *Discovering Alabama*, "Oakmulgee Division/Talladega National Forest"
- *Project WILD*, "Animal Charades," "Everybody Needs a Home"
- *Kingfisher Young Discoverers Encyclopedia of Facts and Experiments*, "The Animal Kingdom," "Where Animals Live"

Unit VI Week 3

Focus is on individuals who have helped students in their community. Students should be able to describe community individuals that have helped them. They should be able to estimate the population of their community. They should also be able to estimate the animal populations in their community.

This Week's Topic

Who has helped me in my community?

Correlations with Alabama Course of Study:

Social Studies:
Community individuals
(5, 9, 19)

Science:
Animals in our community
(19–20, 22)

Language Arts:
Oral presentations on community individuals **(7, 9, 16–17, 19, 21)**

Math:
Estimate the population in our community **(7, 49)**

Thought for the week

Treasure each other in the recognition that we do not know how long we shall have each other.

Community Visitors and Resources

Community individuals to speak on the community and what their jobs mean to the community

Activities and Materials

- *Construction Workers* by Tami Deedick (Mankato, MN: Bridgestone Books, 1998)
- Discuss community individuals and give an oval presentations
- *Garbage Collectors* by Tami Deedick (Mankato, MN: Bridgestone Books, 1998)
- Video: *Discovering Alabama*, "Southeast Alabama/Wiregrass Region"
- Graph the population in the community
- *People Working* by Douglas Florian (New York: Crowell, 1983)
- *Mailbox Superbook*, Grade 2, "Community and Transportation," "Welcome to Our Community"
- *Project Learning Tree*, "The Shape of Things"
- *Project WILD*, "Can Do!"

Unit VI Week 4

Focus is on significant individuals such as the mayor, local scientists, state representatives, members of the community government, and so forth. Students should identify, if possible, scientists in their community. Students should collect information on scientific measurements, such as for population, use in medicine, speed, and force.

This Week's Topic

Who are people outside my community that have affected me?

Correlations with Alabama Course of Study:

Social Studies:
Significant individuals **(5, 9, 19)**

Science:
Scientists in our community **(8–9)**

Language Arts:
Talk about local people **(19, 21)**

Math:
Collect information on scientific measurements **(49)**

Thought for the week

If you want to be loved, love and be loveable.

Community Visitors and Resources

Mayor, local scientist, and your state representative to speak to your class about their jobs

Activities and Materials

- *Project WILD Aquatic*, "Living Research: Aquatic Heroes and Heroines"
- Video: *Discovering Alabama*, "Moundville"
- Compile a list of questions for the visiting scientist; talk and write about the different cultures in your community and their leaders
- Gather information about the President of the United States; write a letter to the mayor asking him questions about his job and his childhood
- Invite a science teacher from the local high school or community college to explain the importance of science

Unit VI Week 5

Focus is on community individuals in the arts and how they have affected the community. Students should read about famous people in the arts. Students should describe how science is related to the arts in areas such as painting, music; the role of physics in various sports, etc.

This Week's Topic

Who in the arts has affected me?

Correlations with Alabama Course of Study:

Social Studies:
Individuals in the arts **(27)**

Science:
Science and art **(9)**

Language Arts:
Read about famous people in the arts **(16, 19–21)**

Math:
Draw repeating patterns **(47–48)**

Thought for the week

Let me live in a house by the side of the road, and be a friend to man!

—S. W. Foss

Community Visitors and Resources

Head of the community art council to speak about a famous artist and do an art project with the class

Activities and Materials

- Discuss repeating patterns and draw repeating patterns
- *Monet* by Mike Venezia (Chicago: Children's Press, 1993)
- *Picasso* by Mike Venezia (Chicago: Children's Press, 1988)
- *Rembrandt* by Mike Venezia (Chicago: Children's Press, 1988)
- *The Legend of the Indian Paintbrush* by Tomie De Paola (New York: Putnam, 1988)
- *Project Learning Tree*, "The Closer You Look"
- *Project WILD Aquatic*, "Water Plant Art"

Unit VI Week 6

Focus is on local individuals in the humanities and how they have helped students and the community. Students should identify examples of science in literature or in such things as stories about storms, animals, plants, machines, etc. Students should give oral presentations on how specific individuals in the community have helped them and their families at various times throughout their lives.

This Week's Topic

Who in the humanities has affected me?

Correlations with Alabama Course of Study:

Social Studies:
Individuals in the humanities **(27)**

Science:
Science and literature **(9)**

Language Arts:
Oral presentations on how others have helped me **(7, 9, 16, 19–21)**

Math:
Explore probability **(53)**

Thought for the week

He who sows courtesy, reaps friendship, and he who plants kindness, gathers love.

Community Visitors and Resources

Author or writer to read literature to the class

Activities and Materials

- *Changes* by Marjorie N. Allen and Shelly Rotner (New York: Macmillan Publ. Co., 1991)
- Discuss with students how people have helped them and have them write a report
- *Do You Want to Bet? Your Chance to Find Out About Probability* by J. Cushman
- *Mailbox Superbook Grade 2*, "All Through the Year," "Computations," "Number Concepts"
- *The Season's of Arnold's Apple Tree* by Gail Gibbons (San Diego: Harcourt Brace Jovanovich, 1984)
- *What Will the Weather be Like Today* by Paul Rogers (New York: Greenwillow, 1990)
- *Project Learning Tree*, "Earth Manners"
- *Project WILD*, "Enviro-Ethics"

Appendix: Resources

Part I. Primary Activity Resources

Being a flexible program, DOH can accommodate a variety of activity resources. However, teachers are strongly encouraged to make sure that all primary resources are consistent with recognized standards for quality and effectiveness. If you have primary resources in mind other than those listed below, contact: Wayne Strickland c/o AWF or Dr. Doug Phillips c/o AMNH for assistance in determining their consistency with national standards.

The following resources are incorporated as primary materials for DOH because:

- these materials are widely accepted and highly rated by master teachers and environmental educators,
- these materials are consistent with nationally recommended guidelines for accuracy, balance, and effectiveness in helping teachers include environmental education as a regular component of instruction,
- these materials have been specifically correlated with academic requirements of the Alabama Course of Study, and
- parent organizations of these materials have worked closely in the development of DOH and are committed to effective environmental education in support of overall educational improvement and student success—personally, civically, and academically.

Alabama's Environmental Legacy: A Series of Classroom Activities, Guide, and Resource Directory for Grades K–2 and *3–5*. Legacy, Inc., 1997.
Legacy, Partners in Environmental Education, Inc.
P.O. Box 3813
Montgomery AL 36109
(800) 240–5115

Aquatic Project WILD, see *Project WILD Aquatic Education Activity Guide.*

Discovering Alabama, a public television series hosted and produced by Dr. Doug Phillips for Alabama Public Television and the Alabama Museum of Natural History; over 40 titles with Teacher's Guides. AMNH, 1985–.
Discovering Alabama
Alabama Museum of Natural History
University of Alabama
Box 870340
Tuscaloosa AL 35487–0340
(205) 348–2039

Project Learning Tree: Environmental Education Pre K–8 Activity Guide. 3d edition. American Forest Foundation, 1995.
Project Learning Tree
Alabama Forestry Association
555 Alabama Street
Montgomery AL 36104

Project WET: Curriculum and Activity Guide. The Watercourse; Western Regional Environmental Education Council, 1995.
Project WILD
Alabama Department of Conservation & Natural Resources
64 N. Union Street
Montgomery AL 36130
(334) 242–3623

Project WILD Activity Guide. 2d edition. Western Regional Environmental Education Council, 1992.
Project WILD
Alabama Department of Conservation & Natural Resources
64 N. Union Street
Montgomery AL 36130
(334) 242–3623

Project WILD Aquatic Education Activity Guide. 2d edition. Western Regional Environmental Education Council, 1992.
Project WILD
Alabama Department of Conservation & Natural Resources
64 N. Union Street
Montgomery AL 36130
(334) 242–3623

Water Sourcebook: A Series of Classroom Activities for Grades K–2 and *3–5*. Legacy, Inc., 1994.
Legacy, Partners in Environmental Education, Inc.
P.O. Box 3813
Montgomery AL 36109
(800) 240–5115

Part II. Supplemental Resources

The following is a partial listing of resources considered supplemental because they have been recommended by DOH teachers as potential sources of information and activities. Many of these materials are not environmentally-based and most have not been officially evaluated for consistency with national environmental education standards. Likewise, these materials have not been formally correlated to requirements of the Alabama Course of Study.

In keeping with DOH policy, teachers are encouraged to take care in choosing supplemental materials that are consistent with recognized standards for quality, accuracy, and balance. Of course, materials that do not meet such standards are sometimes helpful in developing critical thinking skills and students' abilities to analyze biases or inaccuracies that might apply. Here again, assistance can be obtained by contacting Wayne Strickland or Dr. Phillips.

Agriculture in the Classroom: Alabama Treasures by Jacquelyn Autrey et al. Agriculture in the Classroom Foundation, Inc., 1987
Alabama Department of Agriculture & Industries
P.O. Box 336
Montgomery AL 36109–0336

Acorn Naturalists. Resources for the trail and classroom; free catalogue.
17300 East 17th Street, #J–236
Tustin CA 92680
(800) 422–8886

Alabama Forest Resources Center
660 Adams Avenue
Montgomery AL 36130

Alabama Geographic Alliance
Department of Geography
Jacksonville State University
Jacksonville AL 36265
(800) 346–5444

Alabama Heritage Magazine
Box 870342
The University of Alabama
Tuscaloosa AL 35487-0342
(205) 348–7467

Alabama Museum of Natural History
Box 870340
Smith Hall
The University of Alabama
Tuscaloosa AL 35487–0340
(205) 348–7550

Alabama Natural Heritage Program
Alabama Department of Conservation and Natural Resources
64 N. Union Street
Montgomery AL 36130

Alabama PALS Litter Education Activity Guide
340 North Hull
Montgomery Al 36104
(334) 263-7737

America's Private Land: A Geography of Hope. U.S.D.A., 1996
U.S.D.A.
Natural Resource Conservation Service
Washington DC 20250
(800) 245–6340

Anniston Museum of Natural History
P.O. Box 1587
Anniston AL 36202–1587
(256) 237–6766

APT Classroom. A complete listing of APT programs suitable for classroom use is available.
Alabama Public Television
2112 11th Avenue South, Suite 400
Birmingham AL 35205–2884
(800) 239–5233

Audubon Society Field Guide series

Big Book of Everything: Social Studies, edited by Rosemary Alexander. Educational Instructor Publications, 1986

Creative Science Experiences for the Young Child by Imogene Foret and Joy MacKenzie. Incentive Publications, Inc., 1973

Environmental Education
American Forest Foundation
1111 19th Street, NW
Washington DC 20036

Ft. Toulouse/Jackson Educational Activities
Ft. Toulouse/Ft. Jackson Historic Site
2521 West Ft. Toulouse Road
Wetumpka, AL 36093

Geological Survey of Alabama
P.O. Box 869999
The University of Alabama
Tuscaloosa AL 35486–9999
(205) 349–2852

Geological Society of America
P.O. Box 9140
Boulder CO 80301-9140
(303) 447–2020; (800) 472–1988
www.geosociety.org

Global Learning and Observation to Benefit the Environment (*The Globe*), a series of activities and investigations about the earth and global environmental systems for teachers and students.
The Globe Program
744 Jackson Place NW
Washington DC 20503
(800) 858–9947

Golden Press and Western Publishing Company field guide series (now Golden Books)

Instant Kids Books: Martin Luther King
111 W Blanche St.
Mansfield OH 44903
www.InstantKidsBooks.com

The Kingfisher Young Discoverers Encyclopedia of Facts and Experiments, available from Barnes & Noble, Borders, *www.amazon.com* or *www.booksense.com*

Learning about Communities. Prepared by the Educational Research Council of America. Allyn and Bacon, 1982

Magic School Bus, series. Scholastic Inc.

The Mailbox and *The Maibox Superbook*, series. One book each for Preschool through Grade 5. Greensboro, NC: Education Center, 1998. *www.themailbox.com*

Multiple Intelligences: Teaching for Success. The New City School, Inc., 1997.

Nature Conservancy of Alabama
Pepper Place
2821C 2nd Avenue S.
Birmingham AL 35233

Nature Link, Wildlife Education Series
Alabama Wildlife Federation
P.O. Box 1109
Montgomery AL 36102
(800) 822-WILD

Nature's Way series
Center for Environmental Research & Service
Troy State University
Troy AL 36082

Outdoor Classrooms on School Sites. U.S. Department of Agriculture, Soil Conservation Service, 1980.

Peterson Field Guide series, Houghton Mifflin Co.

Pollution Prevention: A Common Sense Solution to a Complex Problem—video.
Discovering Alabama
Alabama Museum of Natural History
University of Alabama
Box 870340
Tuscaloosa AL 35487–0340
(205) 348–2039

Thayer, Robert. *Gray World, Green Heart: Technology, Nature, and the Sustainable Landscape.* Wiley, 1994.

Tocqueville, Alexis de. *Democracy in America.* Edited and abridged by Richard D. Heffner. Penguin Books, 1956.

Torricelli, Robert and Andrew Carroll (Eds.). *In Our Own Words: Extraordinary Speeches of the American Century.* Pocket Books, 1999.

Trimble, Stephen (Ed.). *Words from the Land: Encounters with Natural History Writing.* Peregrine Smith Books, 1988.

Watts, May Theilgaard. *Reading the Landscape of America.* Revised and expanded edition. Collier Macmillan Publishers, 1975.

Whimbey, Arthur and Jack Lochhead. *Problem Solving & Comprehension.* 4th ed. Lawrence Erlbaum Assoc., 1986.

Wilkinson, Loren. *Earth Keeping: Christian Stewardship of Natural Resources.* William B. Eerdmans Publ. Co., 1980.

Wilson, Edward O. *Biophilia.* Harvard University Press, 1984.

Winn, William W. *The Old Beloved Path.* Chattahoochee Indian Heritage Assoc., 1992.